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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte RADHA SEN, TIENTEH CHEN, ROBERT BEER and
KRISTINA GEE

Appeal 2009-005168
Application 10/789,963
Technology Center 1700

Before ADRIENE LEPIANE HANLON, CHUNG K. PAK, and
TERRY J. OWENS, *Administrative Patent Judges*.

PAK, *Administrative Patent Judge*.

DECISION ON APPEAL¹

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's decision finally rejecting claims 48, 49, 51 through 53, 55 through 58, 71, 72, and 80 through 90, all of the pending claims in the above-identified application.² We have jurisdiction under 35 U.S.C. § 6.

¹ The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, or for filing a request for rehearing, as recited in 37 C.F.R. § 41.52, begins to run from the "MAIL DATE" (paper delivery mode) or the "NOTIFICATION DATE" (electronic delivery mode) shown on the PTOL-90A cover letter attached to this decision.

² See page 4 of the Appeal Brief ("App. Br.") filed September 30, 2008.

STATEMENT OF THE CASE

The subject matter on appeal is directed to a method of “generating microporous ink receptive coating using little to no binder materials”(Spec., 3, para. 0015). Details of the appealed subject matter are recited in illustrative claim 48 reproduced from the Claims Appendix to the Appeal Brief as shown below:

48. A print medium having a microporous coating comprising:
- a substrate which serves as a base of said print medium;
 - a first microporous layer comprising a first binder deposited as a liquid on said substrate; and
 - a fusible latex layer deposited over said first microporous layer, wherein said fusible latex layer is microporous and includes particles comprising a hard core material and a soft shell material;
- wherein said latex exhibits self-adhesive properties at a room temperature such that said latex remains in place on said first microporous layer without requiring a second binder and without being fused.

As evidence of unpatentability of the claimed subject matter, the Examiner relies on the following sole prior art reference at page 3 of the Answer (“Ans.”) dated November 26, 2008:

Kasparchik

7,086,732 B2

Aug. 8, 2006

Appellants seek review of the following grounds of rejection set forth at pages 3 through 7 of the Answer:

- 1) Claims 48, 49, 51 through 53, 55 through 58, 71, 72, and 80 through 90 under 35 U.S.C. § 112, first paragraph, as lacking written descriptive support for the presently claimed subject matter in the application disclosures as originally filed;

2) Claims 48, 49, 51 through 53, 55 through 58, 71, 72, and 80 through 90 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as their invention;

3) Claims 48, 49, 51 through 53, 55, 57, 58, 71, 72, 86, and 87 under 35 U.S.C. § 102(e) as anticipated by the disclosure of Kasperchik³; and

4) Claims 48, 49, 51 through 53, 55, 57, 58, 71, 72, 80, and 86 through 89 under 35 U.S.C. § 103(a) as unpatentable over the disclosure of Kasperchik.

DISCUSSION

I. 35 U.S.C. § 112, FIRST PARAGRAPH

ISSUE and CONCLUSION

The dispositive question is: Did the Examiner err in determining that the application disclosure, as originally filed, does not reasonably convey the phrase “deposited as a liquid on said substrate” recited in claim 48 within the meaning of 35 U.S.C. § 112, first paragraph? On this record, we answer this question in the affirmative.

FINDINGS OF FACT, PRINCIPLES OF LAW, and ANALYSIS

As our reviewing court stated in *In re Kaslow*, 707 F.2d 1366, 1375 (Fed. Cir. 1983):

The test for determining compliance with the written description requirement is whether the disclosure of the application as originally filed reasonably conveys to the artisan

³ The Examiner has withdrawn the rejection of claims 80 through 85 and 88 through 90 under 35 U.S.C. § 102(e) as anticipated by the disclosure of Kasperchik (Ans. 10).

that the inventor had possession at that time of the later claimed subject matter, *rather than the presence or absence of literal support* in the specification for the claim language....The content of the drawings may also be considered in determining compliance with the written description requirement. [Citations omitted.] [(Emphasis added.)]

This test requires that the original application disclosure as a whole must be considered. *In re Wright*, 866 F.2d 422, 425 (Fed. Cir. 1989).

Here, the Specification, as originally filed, clearly indicates that “any other known liquid coating technique” may be used to provide a first microporous layer on a substrate (Spec. 4-5, para. 0019). Consistent with this earlier disclosure, the Specification, as originally filed, also states at page 5, paragraph 0021, that:

As shown in Figure 1, a microporous substrate (114) is disposed on the photo or film base (112) immediately preceding the deposition of the hard core/soft shell latex (150), according to a wet on wet configuration.

On this record, the Examiner has not supplied any adequate reason for doubting that the application disclosure as originally filed reasonably conveys to one of ordinary skill in the art that the inventors had possession of the limitation “a first microporous layer...deposited as a liquid on said substrate” recited in claim 48. *In re Alton*, 76 F.3d 1168, 1175 (Fed. Cir. 1996)(“If, on the other hand, the specification contains a description of the claimed invention, albeit not *in ipsius verbis* (in the identical words), then the examiner or Board, in order to meet the burden of proof [of lack of adequate written description], must provide reasons why one of ordinary skill in the art would not consider the description sufficient.”). Accordingly, we reverse the Examiner’s decision rejecting claims 48, 49, 51 through 53, 55

through 58, 71, 72, and 80 through 90 under 35 U.S.C. § 112, first paragraph, as lacking written descriptive support for the presently claimed subject matter in the application disclosures as originally filed.

II. 35 U.S.C. § 112, SECOND PARAGRAPH ISSUES and CONCLUSIONS

The first dispositive question is: Did the Examiner err in determining that the limitation “a first microporous layer comprising...deposited as a liquid on said substrate” recited in claim 48 is indefinite within the meaning of 35 U.S.C. § 112, second paragraph? On this record, we answer this question in the affirmative.

The second dispositive question is: Did the Examiner err in determining that the use of the inconsistent preamble limitation in dependent claims 49, 51 through 53, 55 through 58, 71, 72, and 80 through 90 renders them indefinite within the meaning of 35 U.S.C. § 112, second paragraph? On this record, we answer this question in the negative.

The third dispositive question is: Did the Examiner err in determining that the limitation relating to a shell material comprising a monomer or comprising a coalescing agent recited in claims 81 through 84 and 90 is indefinite within the meaning of 35 U.S.C. § 112, second paragraph? On this record, we answer this question in the affirmative.

FINDINGS OF FACT, PRINCIPLES OF LAW, and ANALYSIS

A claim is considered indefinite under 35 U.S.C. § 112, second paragraph, if it does not reasonably apprise those skilled in the art of its scope. *Amgen, Inc. v. Chugai Pharm. Co., Ltd.*, 927 F.2d 1200, 1217 (Fed. Cir. 1991); *In re Venezia*, 530 F.2d 956, 959 (CCPA 1976). Definiteness is

analyzed “not in a vacuum, but always in light of the teachings of the prior art and of the particular application disclosure as it would be interpreted by one possessing the ordinary level of skill in the pertinent art.” *In re Moore*, 439 F.2d 1232, 1235 (CCPA 1971).

With respect to the limitation “a first microporous layer comprising...deposited as a liquid on said substrate” recited in claim 48, we note that Appellants state that they have “the right to claim a component that is in a particular phase at a particular time” (Reply Br. 9). However, were we to interpret the limitation “a first microporous layer comprising ... deposited as a liquid on said substrate” recited in claim 48 as a first microporous layer in liquid phase (a liquid microporous layer), the subject matter recited in claim 48 would be non-enabling within the meaning of 35 U.S.C. § 112, first paragraph, since the Specification does not provide any guidance as to how to make a liquid microporous layer comprising a binder. It is clear from the Specification that the limitation “deposited as a liquid on said substrate” is a process limitation by which a first microporous layer is formed as acknowledged by the Examiner at page 8 of the Answer and discussed above in the context of written descriptive support at pages 4 and 5 of the Specification. Indeed, the Examiner fully understood the meaning and effect of this process limitation on product claim 48 as is apparent from his response at page 8 of the Answer. Thus, we cannot agree with the Examiner that the limitation “a first microporous layer comprising ... deposited as a liquid on said substrate” would have rendered claim 48 indefinite within the meaning of 35 U.S.C. § 112, second paragraph.

With respect to the preamble limitation “The microporous coating of claim” recited in dependent claims 49, 51 through 53, 55 through 58, 71, 72,

and 80 through 90, it is not clear from these claims whether Appellants intend to further limit the print medium recited in claim 48 or claim only the microporous coating portion of a print medium. On the one hand, claims 49, 51 through 53, 55 through 58, 71, 72, and 80 through 90, by virtue of their dependency on claim 48, could be interpreted as further limiting the printed medium recited in claim 48. On the other hand, the plain language of the preamble limitation “The microporous coating” recited in claims 49, 51 through 53, 55 through 58, 71, 72, and 80 through 90 indicates that they are directed to a microporous coating, not a printed medium. In other words, dependent claims 49, 51 through 53, 55 through 58, 71, 72, and 80 through 90 are susceptible to at least two plausible claim constructions due to Appellants’ inconsistent use of the preamble limitations between claim 48 and its dependent claims. As stated in *Ex parte Miyazaki*, No. 2007-3300, 2008 WL 5105055, at *5 (BPAI Nov. 19, 2008):

[I]f a claim is amendable to two or more plausible claim constructions, the USPTO is justified in requiring the applicant to more precisely define the metes and bounds of the claimed invention by holding the claim unpatentable under 35 U.S.C. § 112, second paragraph, as indefinite.

Thus, we agree with the Examiner that dependent claims 49, 51 through 53, 55 through 58, 71, 72, and 80 through 90 are indefinite within the meaning of 35 U.S.C. § 112, second paragraph.

With respect to the limitation relating to a shell material comprising a monomer or comprising a coalescing agent recited in claims 81 through 84 and 90, the Examiner does not provide any adequate reason why such limitation is deemed indefinite. In other words, the Examiner does not indicate why such limitation does not reasonably apprise those skilled in the

art of its scope. Rather, the Examiner merely alleges inoperability of the claimed invention by stating that “[s]aid monomers do not form a shell and they must be polymerized to become a shell” and “said coalescing agent is a solvent as taught by Kasperchik... and a solvent cannot form a shell” (Ans. 4-5). Thus, we concur with Appellants that the Examiner has not demonstrated that the limitation relating to a shell material comprising a monomer or comprising a coalescing agent would have rendered the scope of claims 81 through 84 and 90 indefinite within the meaning of 35 U.S.C. § 112, second paragraph.

III. 35 U.S.C. § 102(e)⁴

ISSUES AND CONCLUSIONS

With respect to claim 48, the dispositive question is: Did the Examiner err in finding that the print medium taught by Kasperchik is identical or substantially identical to the claimed print medium within the meaning of 35 U.S.C. § 102(e)? On this record, we answer this question in the negative.

With respect to claim 49, the dispositive question is: Did the Examiner err in finding that the colorant-receiving layer taught by Kasperchik corresponding to the claimed fusible latex layer is “ink permeable” within the meaning of 35 U.S.C. § 102(e)? On this record, we answer this question in the affirmative.

With respect to claim 52, the dispositive question is: Did the Examiner err in finding that Kasperchik teaches the claimed glass transition

⁴ In order to avoid piece meal appeal and to resolve the propriety of the prior art rejection, we will presume that the dependent claims are directed to the print medium recited by their parent claim 48.

temperatures for a hard core and a soft shell with sufficient specificity to constitute a description within meaning of 35 U.S.C. § 102(e)? On this record, we answer this question in the affirmative.

With respect to claims 55 and 57, the dispositive question is: Did the Examiner err in finding that that Kasperchik teaches an ink permeable fusible latex layer having a hydrophilic shell comprising a cationic monomer and a coalescing agent within the meaning of 35 U.S.C. § 102(a)? On this record, we answer this question in the affirmative.

With respect to claim 86, the dispositive question is: Did the Examiner err in finding that the claimed core-shell particles size would be inherently produced in Kasperchik's example 1 within the meaning of 35 U.S.C. § 102(e)? On this record, we answer this question in the affirmative.

With respect to claim 87, the dispositive question is: Did the Examiner err in finding that Kasperchik exemplifies a latex colorant-receiving material having a hydrophilic shell having a Tg of about 40 °C within the meaning of 35 U.S.C. § 102(e)? On this record, we answer this question in the negative.

RELEVANT FACTUAL FINDINGS, PRINCIPLES OF LAW, AND ANALYSES

The patentability of a claim in product-by-process form is determined based on the product itself, not on the method of making it. *See In re Thorpe*, 777 F.2d 695, 697 (Fed. Cir. 1985) ("If the product in a product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior art product was made by a different process."). Whether a rejection is under 35 U.S.C. § 102 or § 103, when the appellants' product and a product of the prior art appear to be

identical or substantially identical, the burden shifts to the Appellants to provide evidence that the prior art product does not necessarily or inherently possess the characteristics of the Appellants' claimed product. *See In re Fitzgerald*, 619 F.2d 67, 70 (CCPA 1980). As stated in *In re Best*, 562 F.2d 1252, 1255 (CCPA 1977):

[w]here . . . the claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes, the PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his claimed product. Whether the rejection is based on 'inherency' under 35 U.S.C. § 102, on 'prima facie obviousness' under 35 U.S.C. § 103, jointly or alternatively, the burden of proof is the same, and its fairness is evidenced by the PTO's inability to manufacture products or to obtain and compare prior art products. [Footnote and citations omitted].

CLAIM 48

The Examiner has correctly found at pages 5 and 6 of the Answer that Kasperchik teaches a print medium comprising a photobase layer 4 corresponding to the claimed substrate, a porous vehicle sink layer 6 having a binder corresponding to the claimed first microporous layer, and a porous colorant-receiving layer 8 formed from "core-shell polymer" particles (a polymer having a hydrophilic shell and fusible hydrophobic core) corresponding to the claimed fusible latex layer. The hydrophilic shell and hydrophobic core taught by Kasperchik may be formed with the claimed monomers and can have the claimed T_g (See col. 4, l. 53 to col. 5, l. 20 with a specific focus on col. 9 ll. 18-40 and col. 5, 20-32.)

Although Kasperchik does not mention that the claimed functional limitation of the colorant-receiving layer, i.e., "said latex exhibits self-

adhesive properties at a room temperature such that said latex layer remains in place on said first microporous layer without requiring a second binder and without being fused” as asserted by Appellants, the Examiner has reason to believe that such functional properties are present in the colorant-receiving layer taught by Kasperchik since it is made of the claimed ingredients and/or it is placed over the porous vehicle sink layer having a binder without any mention of an additional binder. *In re Schreiber*, 128 F.3d 1473, 1477-78 (Fed. Cir. 1997), *quoting In re Swinehart*, 439 F.2d 210 (CCPA 1971) (“[T]here is nothing intrinsically wrong with [defining something by what it does rather than what it is] in drafting patent claims.”... Yet, choosing to define an element functionally, i.e., by what it does, carries with it a risk.”). Thus, we concur with the Examiner that Kasperchik renders the subject matter of claim 48 anticipated within the meaning of 35 U.S.C. § 102(e).

CLAIM 49

On this record, we concur with Appellants that the colorant-receiving layer taught by Kasperchik is not “ink permeable” since it is treated to have mordant properties to prevent the passage of a dye or colorant in an ink vehicle (col. 4, l. 34 to col. 5, l. 67). As is apparent from col. 4, ll. 43-46, of Kasperchik, the colorant-receiving layer taught by Kasperchik allows the passage of an ink vehicle only, but not the ink colorant. Thus, we find that the Examiner has not demonstrated that Kasperchik renders the subject matter of claim 49 anticipated within the meaning of 35 U.S.C. § 102(e).

CLAIM 52

On this record, the Examiner found at page 6 of the Answer that Kasperchik teaches that its colorant-receiving layer can have a hydrophobic

core having a glass transition temperature (T_g) higher than ambient temperature, preferably 45 °C to about 160 °C, more preferably to 60 °C to about 130 °C (col. 5, ll. 21-32). The Examiner also found at page 6 of the Answer that the latex colorant-receiving material exemplified by Kasperchik has a hydrophobic core having T_g of about 45 °C and a hydrophilic shell having a T_g of about 40 °C (col. 9, ll. 35-40). It follows that some picking and choosing is required to arrive at the claimed core and shell glass transition temperatures. As stated in *In re Arkley*, 455 F.2d 586, 587-88 (CCPA 1972) states:

[F]or the instant rejection under 35 U.S.C. § 102(e) to have been proper, the [prior art] reference must clearly and unequivocally disclose the claimed compound or direct those skilled in the art to the compound without any need for picking, choosing, and combining various disclosures.... Such picking and choosing may be entirely proper in the making of a 103, obviousness rejection, where the applicant must be afforded an opportunity to rebut with objective evidence any inference of obviousness..., but it has no place in the making of a 102, anticipation rejection.

Accordingly, we concur with Appellants that Kasperchik does not teach the claimed glass transition temperatures for a hard core and a shell with sufficient specificity to constitute a description within meaning of 35 U.S.C. § 102(e). *In re Schaumann*, 572 F.2d 312, 315 (CCPA 1978); *see also In re Peterson*, 315 F.3d 1325, 1329 (Fed. Cir. 2003):

In cases involving overlapping ranges, we and our predecessor court have consistently held that even a slight overlap in range establishes a *prima facie* case of obviousness.

CLAIMS 55 AND 57

Contrary to Appellants' arguments at pages 15 and 16 of the Appeal Brief, the Examiner correctly found that Kasperchik teaches, at col. 4, l. 43 to col. 5, l. 20, that its hydrophilic shell comprises a cationic monomer and a coalescing agent at pages 5, 6, 8, and 10 of the Answer. However, as indicated *supra*, Kasperchik does not teach an ink permeable color-receiving layer. Thus, for the same reasons states above, we concur with Appellants that Kasperchik does not render the subject matter of claims 55 and 57 anticipated within the meaning of 35 U.S.C. § 102(e).

CLAIM 86

The Examiner asserts that "the core-shell particles in example 1 [of Kasperchik] would meet the [core-shell particle size recited in] claim 86 inherently" (Ans. 10). However, the Examiner has not supplied any factual basis, much less any explanation, as to why or how the claimed core-shell particles size would necessarily be produced in Kasperchik's example 1. Thus, on this record, the Examiner has not demonstrated that Kasperchik inherently produces a colorant-receiving layer having the claimed core-shell particles size within the meaning of 35 U.S.C. § 102(e). *Ex parte Levy*, 17 USPQ2d 1461, 1464 (BPAI 1990) (When an examiner relies upon a theory of inherency, there must be "a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art.")

CLAIM 87

As indicated *supra*, the Examiner correctly found that the exemplified latex colorant receiving material has a hydrophobic core having a glass transition temperature (T_g) of about 45 °C and a hydrophilic shell having a T_g of about 40 °C. (col. 9, ll. 35-40). Thus, on this record, we concur with

the Examiner that Kasperchik renders the subject matter of claim 87 anticipated within the meaning of 35 U.S.C. § 102(e).

IV. 35 U.S.C. § 103(a).

ISSUE AND CONCLUSION

The dispositive question is: Did the Examiner err in concluding that Appellants have failed to remove Kasperchik as “prior art” for the purpose of the § 103(a) rejection of record? On this record, we answer this question in the affirmative.

RELEVANT FACTUAL FINDINGS, PRINCIPLES OF LAW, AND
ANALYSIS

We concur with Appellants that this rejection fails since Kasperchik is not available as prior art under 35 U.S.C. § 103. In particular, 35 U.S.C. § 103(c) states that:

Subject matter developed by another person, which qualifies as prior art only under one or more of subsections (e), (f), and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Appellants state that Kasperchik and the present application are assigned to the same Hewlett-Packard development Co. LP (App. Br. 22). In support of this position, Appellants provide the recorded reel/frame assignment numbers for both Kasperchik and the present application (*id.*). Pursuant to *Manual of Patent Examining Procedure (MPEP)* § 706.02(1)(2) (Rev. 6, Sept. 2007), Appellants further state that:

Appellants hereby state that the subject matter of the present application and the Kasperchik reference were, at the time the invention of the present application was made, owned by, or subject to an obligation of assignment to, the same person, i.e., Hewlett-Packard Development Co. LP.” [(Appeal Brief filed June 25, 2008 and Reply Br. 15.)].

Accordingly, we reverse the Examiner’s decision rejecting claims 48, 49, 51 through 53, 55, 57, 58, 71, 72, 80, and 86 through 89 under 35 U.S.C. § 103(a) as unpatentable over the disclosure of Kasperchik.

ORDER

In summary:

- 1) The rejection of claims 48, 49, 51 through 53, 55 through 58, 71, 72, and 80 through 90 under 35 U.S.C. § 112, first paragraph, as lacking written descriptive support for the presently claimed subject matter in the application disclosures as originally filed is reversed;
- 2) The rejection of claim 48 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as their invention is reversed;
- 3) The rejection of claims 49, 51 through 53, 55 through 58, 71, 72, and 80 through 90 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as their invention is affirmed;
- 4) Claims 48 and 87 under 35 U.S.C. § 102(e) as anticipated by the disclosure of Kasperchik is affirmed;

5) Claims 49, 51 through 53, 55, 57, 58, 71, 72, and 86 under 35 U.S.C. § 102(e) as anticipated by the disclosure of Kasperchik is reversed; and

6) The rejection of claims 48, 49, 51 through 53, 55, 57, 58, 71, 72, 80, and 86 through 89 under 35 U.S.C. § 103(a) as unpatentable over the disclosure of Kasperchik is reversed.

In view of the foregoing, the decision of the Examiner is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a) (2008).

AFFIRMED

tc

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